



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/053,396	01/17/2002	Rudolf J. Dams	56313US009	1281

32692 7590 03/03/2005

3M INNOVATIVE PROPERTIES COMPANY  
PO BOX 33427  
ST. PAUL, MN 55133-3427

EXAMINER

COSTALES, SHRUTI S

ART UNIT PAPER NUMBER

1714

DATE MAILED: 03/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/053,396

Applicant(s)

DAMS, RUDOLF J.

Examiner

Shruti S. Costales

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 17 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 5/6/02, 11/12/02, 12/20/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The information disclosure statements (IDS) submitted on January 17, 2002, November 7, 2002, and December 13, 2004 were filed in compliance with the provisions of 37 CFR 1.97. Accordingly, each of the three information disclosure statements filed by the Applicant have been considered by the Examiner.

### ***Oath/Declaration***

2. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

It does not identify the foreign application for patent or inventor's certificate on which priority is claimed pursuant to 37 CFR 1.55, and any foreign application having a filing date before that of the application on which priority is claimed, by specifying the application number, country, day, month and year of its filing.

Receipt is acknowledged of papers filed under 35 U.S.C. 119 (a)-(d) based on an application filed in the European Patent Office on January 19, 2001. Applicant has not complied with the requirements of 37 CFR 1.63(c), since the oath, declaration or application data sheet does not acknowledge the filing of any foreign application. A new oath, declaration or application data sheet is required in the body of which the present application should be identified by application number and filing date.

***Specification***

3. The disclosure is objected to because of the following informalities:

On page 22 of the specification, lines 1 and 5 show improper spacing of the semi-colon " ;". The space preceding the semi-colon must be deleted in both instances.

Appropriate correction is required.

The use of the trademark "FC 405" on page 1, line 23 of the specification has been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

The abstract of the disclosure is objected to because the Abstract exceeds 150 words, includes the title of the invention, and simply recites claim 1 of the invention.

Correction is required. See MPEP § 608.01(b).

Applicant is reminded of the proper content of an Abstract of the Disclosure.

In chemical patent abstracts for compounds or compositions, the general nature of the compound or composition should be given as well as its use, *e.g.*, "The compounds are of the class of alkyl benzene sulfonyl ureas, useful as oral anti-diabetics." Exemplification of a species could be illustrative of members of the class. For processes, the type reaction, reagents and process conditions should be stated, generally illustrated by a single example unless variations are necessary.

Complete revision of the content of the abstract is required on a separate sheet.

Applicant is reminded of the proper language and format for an abstract of the disclosure.

Art Unit: 1714

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

### ***Claim Objections***

4. Claims 2, 12 and 13 are objected to because of the following informalities: In claim 2 a "," is required immediately after "acyl group". In claims 12 and 13 a "," is required immediately after "ceramics". The addition of the "," in claims 2, 12, and 13 is required to properly comply with the requirements of a Markush group. Appropriate correction is required. Please refer to MPEP 2173.05(h) for the requirements of a proper Markush group.

Claim 13 is additionally objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim must list more than one claim. Claim 13 currently recites "...any of claim 1 wherein..." and fails to specify which other claims besides claim 1 it depends from. See MPEP § 608.01(n). However, it is the Examiner's understanding that the Applicant meant to have Claim 13 depend only from Claim 1 and that the language "any of" was inserted in error. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 15-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The scope of claim 15 is indefinite in that Q<sup>4</sup> has not been defined in the claim. Claim 16 has been rejected as being dependent from a rejected base chain, namely claim 15.

Claims 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The phrase "units derived from non-fluorinated monomers" seems to be repeated in claim 8. It is not clear to the Examiner how "the units derived from the non-fluorinated monomers are the units derived from the non-fluorinated monomers". Correction and/or clarification is required.

***Double Patenting***

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Omum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

Art Unit: 1714

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim 1 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 7 of U.S. Patent Number 6,649,272. Although the conflicting claims are not identical, they are not patentably distinct from each other because they both claim a composition having a fluorochemical moiety and a major amount of solvent. With respect to the fluorochemical moiety, it is the Examiner's position that the condensation product in claim 1 of the '272 patent (upon which claim 7 depends) is the same as or very similar to the fluorochemical oligomer in the present claim 1.

7. Claim 1 is directed to an invention not patentably distinct from claim 7 of the commonly assigned '272 patent to 3M Innovative Properties Company. Specifically, refer to the above for an explanation.

The U.S. Patent and Trademark Office normally will not institute an interference between applications or a patent and an application of common ownership (see MPEP § 2302). Commonly assigned to 3M Innovative Properties Company, the '272 patent discussed above, would form the basis for a rejection of the noted claims under 35 U.S.C. 103(a) if the commonly assigned case qualifies as prior art under 35 U.S.C. 102(e), (f) or (g) and the conflicting inventions were not commonly owned at the time the

invention in this application was made. In order for the examiner to resolve this issue, the assignee can, under 35 U.S.C. 103(c) and 37 CFR 1.78(c), either show that the conflicting inventions were commonly owned at the time the invention in this application was made, or name the prior inventor of the conflicting subject matter.

A showing that the inventions were commonly owned at the time the invention in this application was made will preclude a rejection under 35 U.S.C. 103(a) based upon the commonly assigned case as a reference under 35 U.S.C. 102(f) or (g), or 35 U.S.C. 102(e) for applications filed on or after November 29, 1999.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Kistner et al. (U.S. Patent Number 5,980,992), hereinafter referred to as Kistner, in view of the evidence set forth in the *Polymer Science Dictionary* by Mark Alger (1997).

With respect to claim 1, Kistner discloses a fluorochemical composition comprising an organic solvent and a fluorochemical oligomer (Col. 11, lines 48-52) where -

(i) the solvent is present in a major amount (Col. 11, lines 66-67 Col. 12, lines 1-6);



Art Unit: 1714

(ii) the fluorochemical oligomer is dispersed or dissolved in said organic solvent in an amount of 0.1% by weight to 50% by weight (Col. 11, lines 66-67 Col. 12, lines 1-6);

(iii) the fluorochemical oligomer is represented by the general formula:



a. wherein X represents the residue of an initiator or hydrogen. The oligomer in formula I of Kistner shown at the top of Col. 6 and shown above inherently contains a free radical initiator as evidenced by the reference to "free-radical oligomerization" at Col. 10, line 1. Although this "free-radical oligomerization" is described in the context of an oligomer of formula II in Col. 9, nevertheless, it appears that "free-radical oligomerization" is the process used by Kistner to oligomerize monomers;

b.  $R_f$  represents units derived from fluorinated monomers (Col. 6, lines 3-15);

c. the remaining portion in formula I above represents non-fluorinated monomers and silyl group (Col. 6, lines 3-15), wherein each of the silyl group substituents represents an alkyl group, an aryl group, or a hydrolyzable group (Col. 6, lines 3-15);

e. formula I above inherently contains a chain transfer agent as control of the length or degree of oligomerization is conventionally achieved via a chain transfer agent. As evidence supporting this statement note that, "...chain

Art Unit: 1714

transfer is the main mode of polymer chain growth termination", Alger. *Polymer Science Dictionary*. Chapman & Hall, 1997. p. 80. QD380.3.A52; and

f. the degree of polymerization/oligomerization is between around 0-100 (Col. 9, lines 36-37 and Col. 11, line 22).

With respect to claim 2, Kistner discloses a fluorochemical composition corresponding to claim 1 of the present invention wherein at least one of the groups attached to the silyl groups is a hydrolyzable group selected from the group consisting of halogen, an alkoxy group, an acyloxy group, an acyl group and an aryloxy group (Col. 6, lines 3-15 and Col. 5, lines 47-55).

With respect to claim 3, Kistner discloses a fluorochemical composition corresponding to claim 1 of the present invention wherein G is specifically defined as shown in the formula in claim 3 of the present invention (Col. 8, lines 10-29).

With respect to claim 4, Kistner discloses a fluorochemical composition corresponding to claim 1 of the present invention wherein  $R_f$  comprises a unit derived from a fluorinated monomer of the formula shown in claim 4 of the present invention (Col. 6, line 34).

With respect to claim 5, Kistner discloses a fluorochemical composition corresponding to claim 1 of the present invention wherein  $M^a$  is a unit derived corresponding to the formula shown in claim 5 of the present invention (Col. 7, lines 19-67 and Col. 8, lines 1-29).

With respect to claim 6, Kistner discloses a fluorochemical composition corresponding to claim 1 of the present invention wherein G corresponds to the formula shown in claim 6 of the present invention (Col. 7, lines 19-67 and Col. 8, lines 1-29).

With respect to claim 7, Kistner discloses a fluorochemical composition corresponding to claim 1 of the present invention wherein the composition is a homogeneous composition further comprising water and an organic or inorganic acid (Col. 11, lines 48-52 and Col. 12, lines 26-36).

With respect to claim 8, Kistner discloses a fluorochemical composition corresponding to claim 1 of the present invention wherein the units derived from non-fluorinated monomers are shown in the formula in claim 8 of the present invention (Col. 6, lines 55-67 and Col. 7, lines 1-18).

With respect to claim 9, Kistner discloses a method of treating a substrate comprising applying to said substrate a composition corresponding to claim 1 of the present invention (Col. 13, lines 33-59).

With respect to claim 10, Kistner discloses a method of treating a substrate comprising applying to said substrate a composition corresponding to claim 1 of the present invention and exposing a thus obtained coated substrate to water and an organic or inorganic acid (Col. 14, lines 17-28).

With respect to claim 11, Kistner discloses a method of treating a substrate corresponding to claim 9 of the present invention further comprising the step of exposing the coated substrate to an elevated temperature of 25°C to at least about 100°C (Col. 13, lines 26-32).

With respect to claim 12, Kistner discloses a method corresponding to claim 9 of the present invention wherein said substrate is selected from the group consisting of plastics and glass (Col. 3, lines 26-40).

With respect to claim 13, Kistner discloses a substrate comprising a coating derivable from the coating composition described in claim 1 of the present invention wherein the substrate is selected from the group consisting of plastics and glass (Col. 3, lines 26-40).

With respect to claim 14, Kistner discloses a fluorochemical oligomer corresponding to the formula shown in claim 14 of the present invention (similar to claim 1 of the present invention discussed above), and wherein  $M^f$  represents units derived from fluorinated monomers having the formula shown in claim 14 of the present invention similar to claim 4 of the present invention discussed above (Col. 6, lines 1-36).

With respect to claim 15, Kistner discloses a fluorochemical oligomer having the formula shown in claim 15 of the present invention (similar to claims 1 and 14 of the present invention discussed above) and wherein  $M^a$  represents units having the formula shown in claim 15 of the present invention (Col. 6, lines 1-36 and Col. 8, lines 1-29).

With respect to claim 16, Kistner discloses a fluorochemical oligomer corresponding to claim 15 of the present invention wherein G corresponds to the formula shown in claim 16 of the present invention (Col. 6, lines 1-36 and Col. 8, lines 1-29).

With respect to claim 17, Kistner discloses a fluorochemical oligomer having the formula shown in claim 17 of the present invention (similar to claims 1, 14, and 15 of the

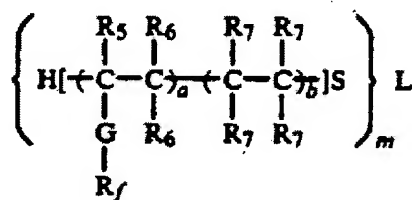
Art Unit: 1714

present invention as discussed above) and wherein G corresponds to the formula shown in claim 17 of the present invention (Col. 6, lines 1-36 and Col. 8, lines 1-29).

In light of the above, it is clear that Kistner anticipates the presently cited claims.

10. Claims 14-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Dams et al. (U.S. Patent Number 5,276,175), hereinafter referred to as Dams.

With respect to claim 14, Dams discloses a fluorochemical oligomer of the formula (see bottom of Col. 14):



It is the Examiner's position that the above formula corresponds to the formula shown in the present claim 14. Furthermore, H corresponds to the free radical initiator X shown in present claim 14 and L in the above formula of Dams corresponds to G in present claim 14 which is an end-capping agent or chain transfer agent residue including silanes (Col. 17, lines 52-67 and Col. 18, lines 1-26). The specific fluorinated portion has the formula shown in claim 14 of the present invention (Col. 7, lines 64-68 and more specifically Col. 8, lines 25-27). The non-fluorinated portion of the oligomer in present claim 14 corresponds to R<sub>5</sub>, R<sub>6</sub>, and R<sub>7</sub> in the Dams formula shown above (Col. 12, lines 52-68; and Cols. 13 and 14). The degree of oligomeroerization/polymerization of each portion of the fluorochemical oligomer shown above is in the range of about 2-40

Art Unit: 1714

(Col. 4, lines 55-60 and Col. 5, lines 49-52). Finally, at least one of the silyl group substituents contains a hydrolyzable group (Col.18, lines 22-23).

With respect to claim 15, Dams discloses a fluorochemical oligomer corresponding to the formula shown above in the discussion above regarding present claim 14. H in the above formula of Dams corresponds to the free radical initiator X shown in claim 15 of the present invention and L in the above formula of Dams corresponds to G in present claim 15 which is an end-capping agent or chain transfer agent residue including silanes (Col. 17, lines 52-67 and Col. 18, lines 1-26). The fluorinated portion of the of the fluorochemical oligomer is disclosed in Col. 7, lines 64-68, Col. 8, lines 1-27, Col. 15, lines 57-68, and Col. 16, lines 17-22. The non-fluorinated portion of the oligomer in present claim 15 corresponds to R<sub>5</sub>, R<sub>6</sub>, and R<sub>7</sub> in the Dams formula shown above (Col. 12, lines 52-68; and Cols. 13 and 14). The final oligomeric portion in the fluorochemical oligomer of present claim 15 is defined by the formula shown in claim 15 (Col. 20, lines 1-26). The degree of oligomerization/polymerization of each portion of the fluorochemical oligomer shown above is in the range of about 2-40 (Col. 4, lines 55-60 and Col. 5, lines 49-52). Finally, at least one of the silyl group substituents contains a hydrolyzable group (Col.18, lines 22-23).

With respect to claim 16, Dams discloses a fluorochemical oligomer corresponding to claim 15 of the present invention wherein G corresponds to the formula shown in claim 16 of the present invention (Col. 20, lines 1-26).

With respect to claim 17, Dams discloses a fluorochemical oligomer corresponding to the formula shown above in the discussion above regarding present

Art Unit: 1714

claim 14. H in the above formula of Dams corresponds to the free radical initiator X shown in present claim 17 and L in the above formula of Dams corresponds to G in present claim 17 which is an end-capping agent or chain transfer agent residue including silanes (Col. 17, lines 52-67 and Col. 18, lines 1-26). The fluorinated portion of the of the fluorochemical oligomer is discussed in Col. 7, lines 64-68, Col. 8, lines 1-27, Col. 15, lines 57-68, and Col. 16, lines 17-22. The non-fluorinated portion of the oligomer in claim 15 corresponds to  $R_5$ ,  $R_6$ , and  $R_7$  in the Dams formula shown above (Col. 12, lines 52-68; and Cols. 13 and 14). The degree of oligomeroerization/polymerization of each portion of the fluorochemical oligomer shown above is in the range of about 2-40 (Col. 4, lines 55-60 and Col. 5, lines 49-52). Finally, at least one of the silyl group substituents contains a hydrolyzable group (Col.18, lines 22-23).

In view of the above discussion, it is clear that Dams anticipates the presently cited claims.

11. Claims 1-11 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Kuwamura et al. (U.S. Patent Number 4,886,862), hereinafter referred to as Kuwamura.

With respect to claim 1, Kuwamura discloses a fluorochemical composition comprising an organic solvent and a fluorochemical oligomer (Col. 2, lines 1-8) where -

- (i) the solvent is present in a major amount (Col. 7, lines 55-68);
- (ii) the fluorochemical oligomer is dispersed or dissolved in said organic solvent in an amount of at least about 0.02% by weight (Col. 7, lines 55-68);

Art Unit: 1714

(iii) the fluoro-olefin copolymer is obtained by polymerizing a monomeric mixture comprising a fluoroolefin as an essential component in the presence of a hydrolyzable silyl group-containing compound (Col. 2, lines 1-8).

a. wherein the fluoro-olefin copolymer includes an initiator or hydrogen (Col. 5, lines 22-36);

b. the fluoro-olefin copolymer includes fluorinated monomers (Col. 2, lines 1-68);

c. the fluoro-olefin copolymer includes non-fluorinated monomers (Col. 2, lines 18-21);

d. the fluoro-olefin copolymer includes a silyl group portion having at least one hydrolyzable group as its substituents (Col. 3, lines 5-50);

e. the fluoro-olefin copolymer includes a chain transfer agent (Col. 4, lines 61-68; Col. 5, lines 1-15; and Col. 6, lines 27-30); and

f. the degree of oligomerization/polymerization of the fluoro-olefin may be in the range of about 1-100 (Col. 6, lines 35-37).

With respect to claim 2, Kuwamura discloses a fluorochemical composition corresponding to claim 1 of the present invention wherein at least one of the groups attached to the silyl groups is a hydrolyzable group selected from the group consisting of halogen, an alkoxy group, an acyloxy group, an acyl group and an aryloxy group (Col. 3, lines 5-50).



With respect to claim 3, Kuwamura discloses a fluorochemical composition corresponding to claim 1 of the present invention wherein the chain transfer agent residue is specifically defined as shown in the formula in claim 3 of the present invention (Col. 4, lines 61-68; Col. 5, lines 1-15; and Col. 6, lines 27-30).

With respect to claim 4, Kuwamura discloses a fluorochemical composition corresponding to claim 1 of the present invention wherein the fluorinated portion comprises a unit derived from a fluorinated monomer of the formula shown in claim 4 of the present invention (Col. 2, lines 25-52 and Col. 3, lines 8-46).

With respect to claim 5, Kuwamura discloses a fluorochemical composition corresponding to claim 1 of the present invention wherein the silyl group portion is a unit derived corresponding to the formula shown in claim 5 of the present invention (Col. 3, lines 5-68 and Col. 4, lines 1-39).

With respect to claim 6, Kuwamura discloses a fluorochemical composition corresponding to claim 1 of the present invention wherein the chain transfer agent residue corresponds to the formula shown in claim 6 of the present invention (Col. 3, lines 5-68 and Col. 4, lines 1-39).

With respect to claim 7, Kuwamura discloses a fluorochemical composition corresponding to claim 1 of the present invention wherein the composition is a homogeneous composition further comprising water and an organic or inorganic acid (Col. 6, lines 63-67 and Col. 14, lines 14-20).

With respect to claim 8, Kuwamura discloses a fluorochemical composition corresponding to claim 1 of the present invention wherein the units derived from non-

Art Unit: 1714

fluorinated monomers are shown in the formula in claim 8 of the present invention (Col. 3, lines 51-68 and Col. 4, lines 1-39).

With respect to claim 9, Kuwamura discloses a method of treating a substrate comprising applying to said substrate a composition corresponding to claim 1 of the present invention (Col. 10, lines 66-68 and Col. 11 lines 1-2).

With respect to claim 10, Kuwamura discloses a method of treating a substrate comprising applying to said substrate a composition corresponding to claim 1 of the present invention and exposing a thus obtained coated substrate to water and an organic or inorganic acid (Cols. 11, 12, and 13; and Tables 2-4).

With respect to claim 11, Kuwamura discloses a method of treating a substrate corresponding to claim 9 of the present invention further comprising the step of exposing the coated substrate to an elevated temperature of 60°C to 150°C (Col. 7, lines 45-47).

With respect to claim 14, Kuwamura discloses a fluorochemical oligomer (Col. 2, lines 1-8) corresponding to the fluoro-olefin copolymer discussed in claim 1 above and wherein the fluorinated portion (Col. 2, lines 1-68) represents units derived from fluorinated monomers having the formula shown in claim 14 of the present invention (similar to claim 4 of the present invention discussed above). See Col. 2, lines 25-52 and Col. 3, lines 8-46. The non-fluorinated portion (Col. 2, lines 18-21) of the fluoro-olefin copolymer includes a silyl group portion (Col. 3, lines 5-50) and a chain transfer agent residue (Col. 4, lines 61-68; Col. 5, lines 1-15; and Col. 6, lines 27-30). The

Art Unit: 1714

degree of oligomerization/polymerization of the fluoro-olefin may be in the range of about 1-100 (Col. 6, lines 35-37).

In light of the above, it is clear that Kuwamura anticipates the presently cited claims.

### ***Conclusion***

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure includes the following: Tanaka et al. (U.S. Patent Number 6,156,860) discloses a surface active agent composed to a copolymer polymerized by essential constituting units of an ethylenic unsaturated monomer containing fluorinated alkyl group and an ethylenic unsaturated monomer containing a silicone chain. Azzopardi et al. (U.S. Patent Number 5,997,943) discloses a hydrophobic and oleophobic composition for coating having a fluoroalkoxysilane, an aqueous solvent system, and a catalyst. Hideki (Japanese Publication Number 07-062297) discloses a surface treating composition having a fluorine-containing organic silicon compound.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shruti S. Costales whose telephone number is (571) 272-8389. The examiner can normally be reached on Monday - Friday, 7:00 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone

Art Unit: 1714

number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866) 217-9197 (toll-free).

Shruti S. Costales  
February 25, 2005

*Pam Jagannathan*  
VASU JAGANNATHAN  
SUPERVISOR OF PATENT APPLICATIONS  
TECHNOLOGY CENTER 1714